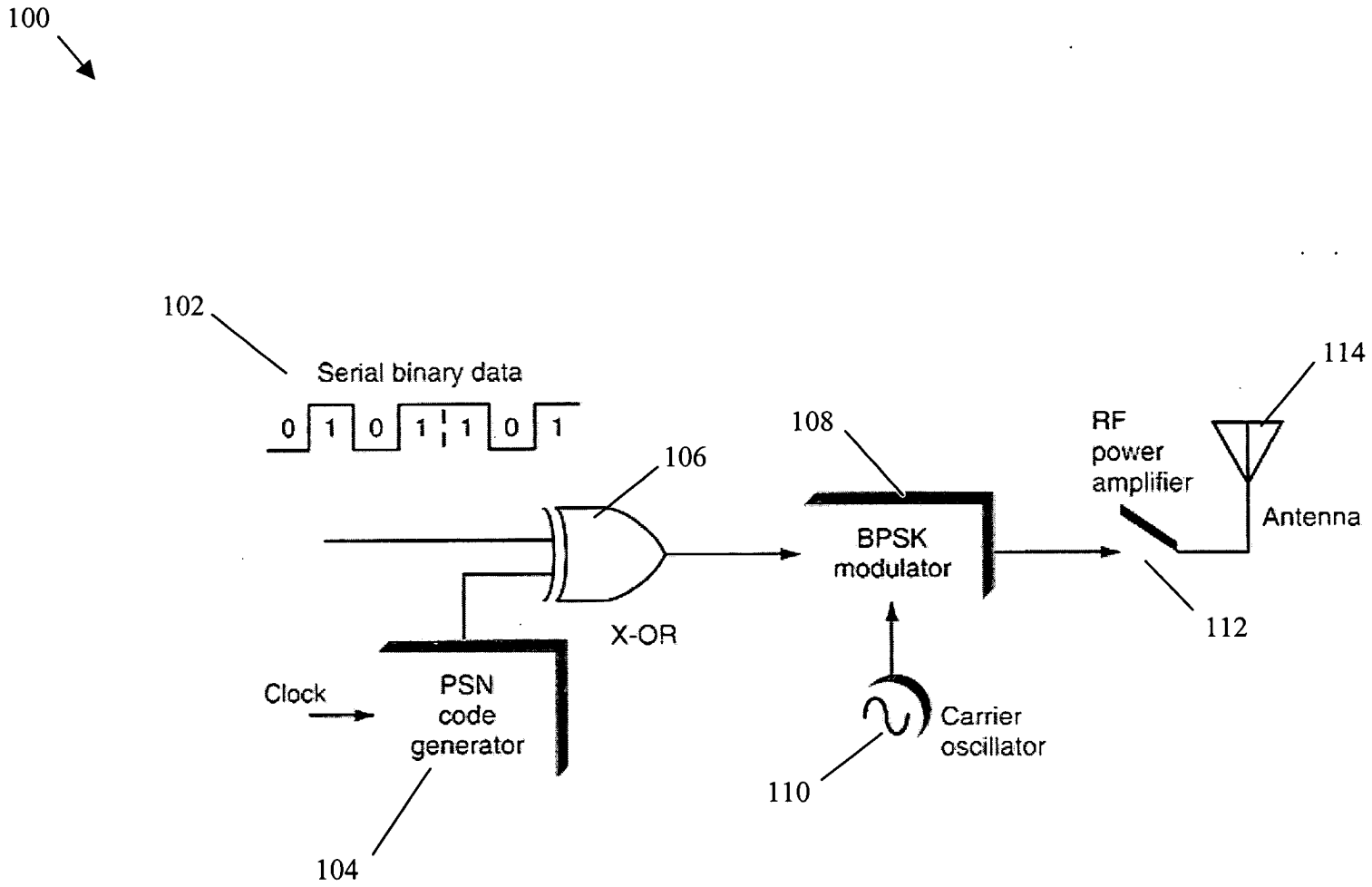

FIG. 1

(PRIOR ART)

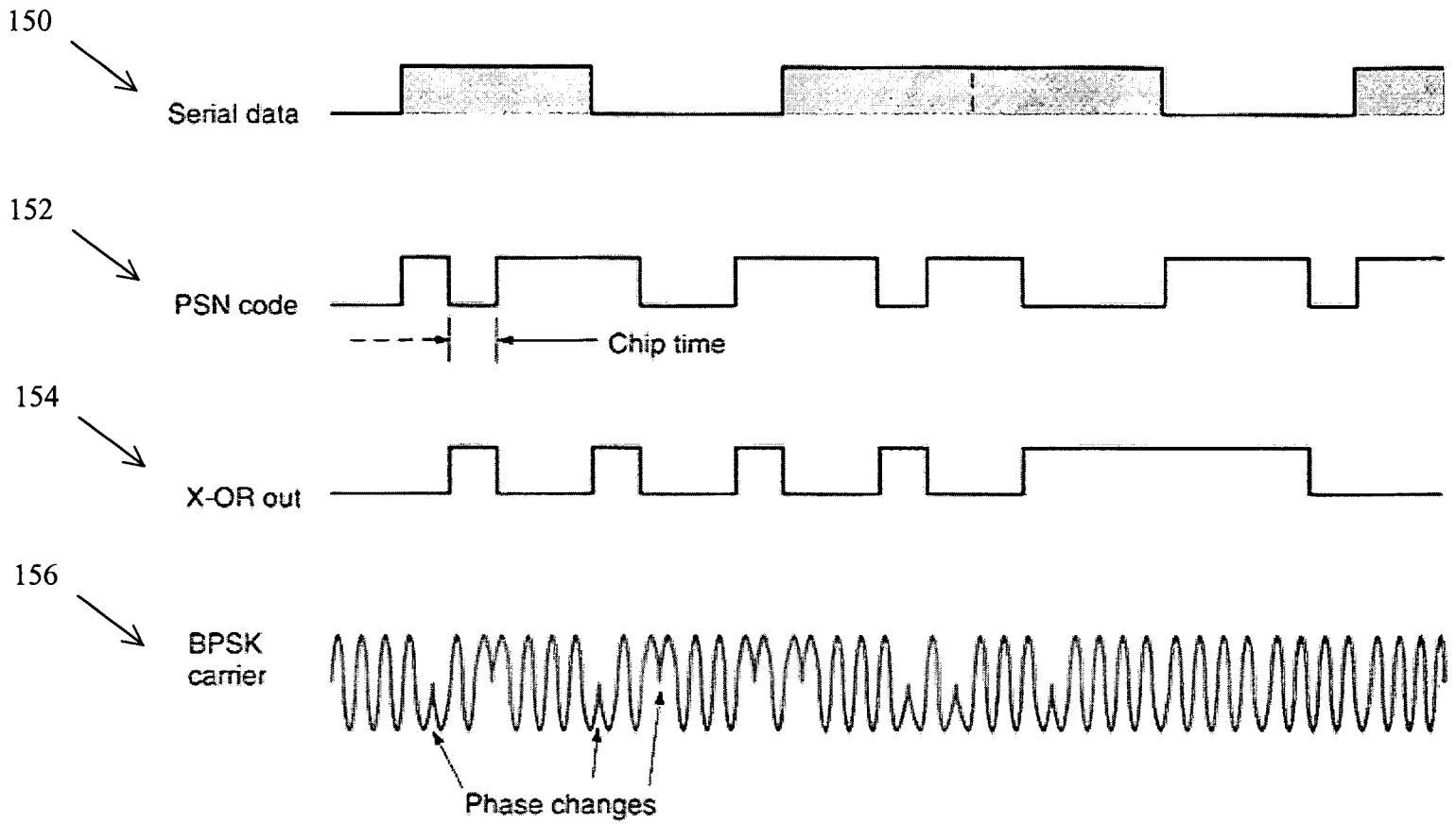

FIG. 2

(PRIOR ART)

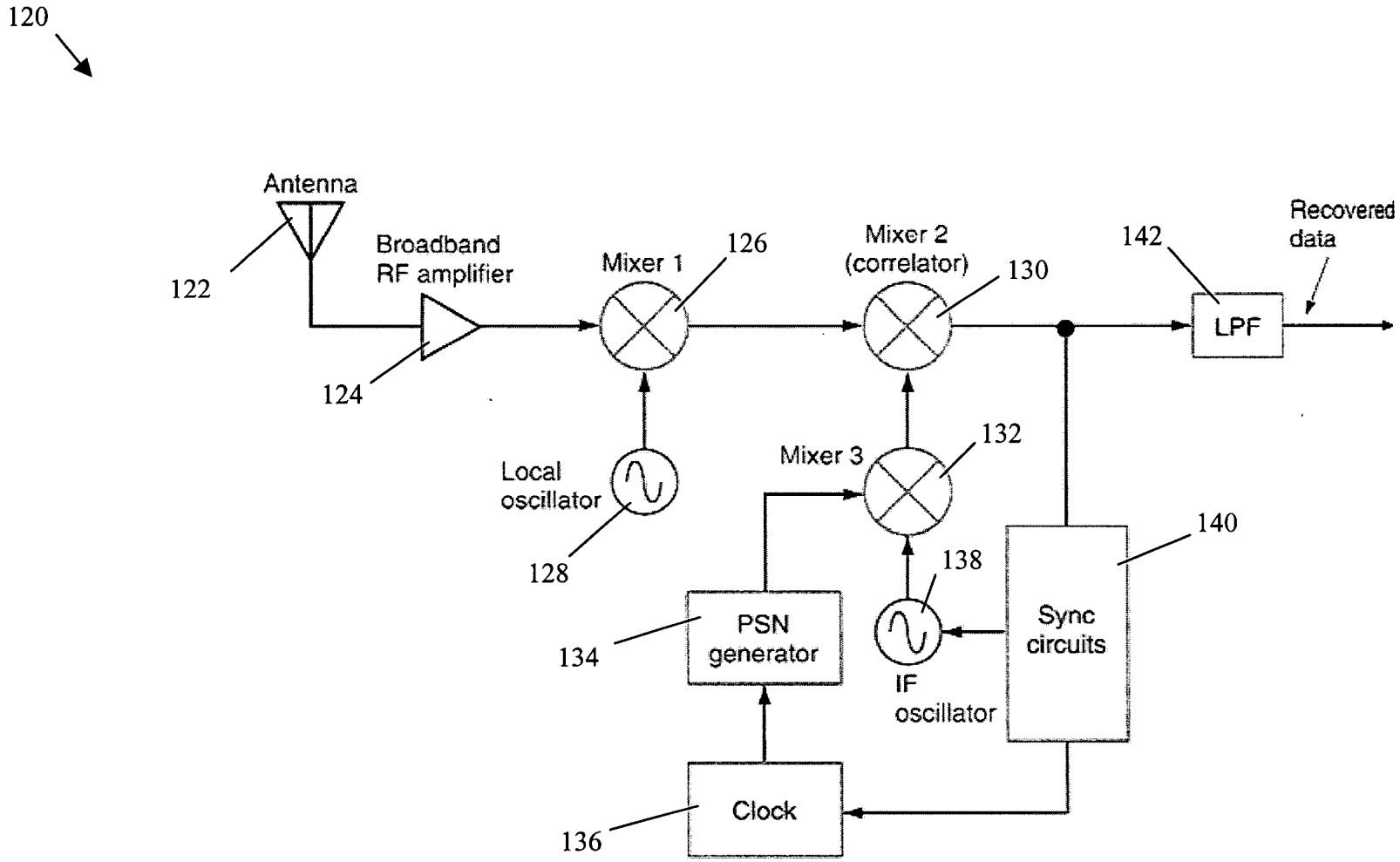

FIG. 3

(PRIOR ART)

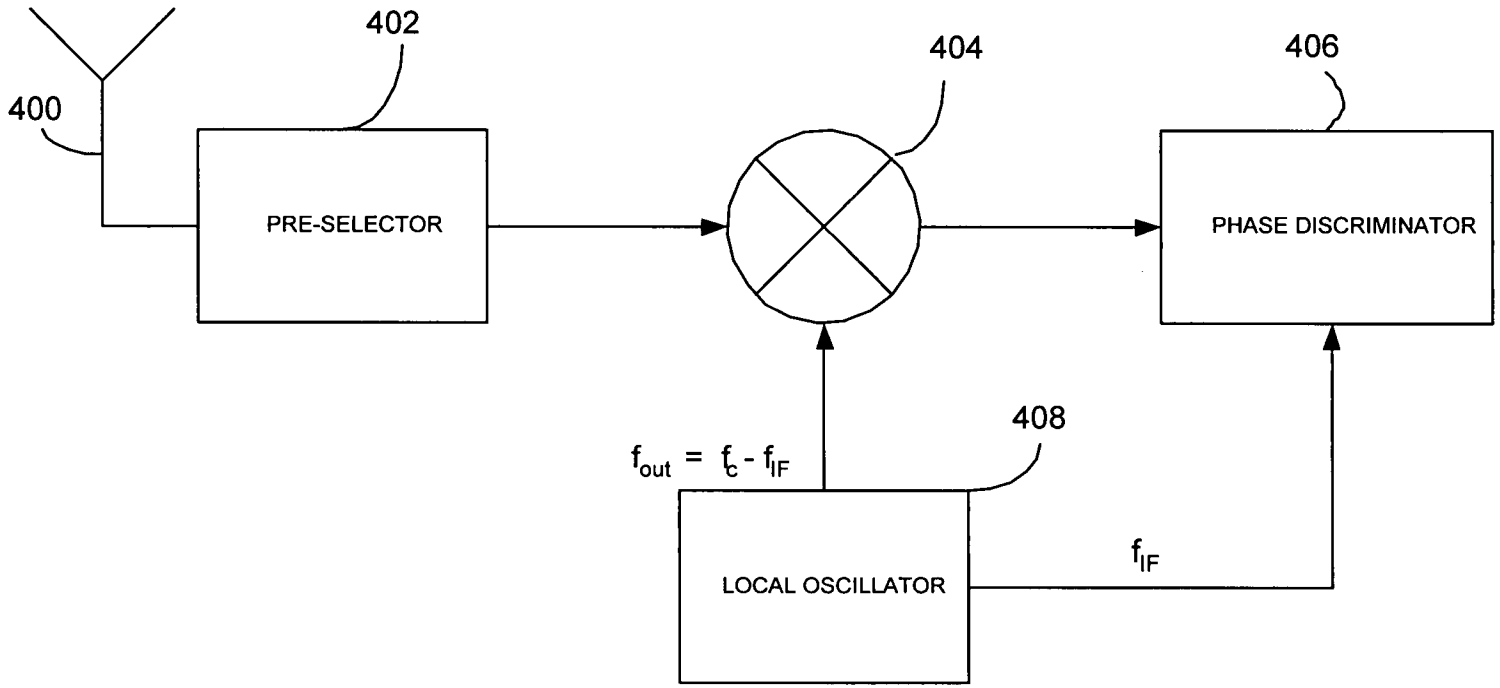

FIG. 4
(PRIOR ART)

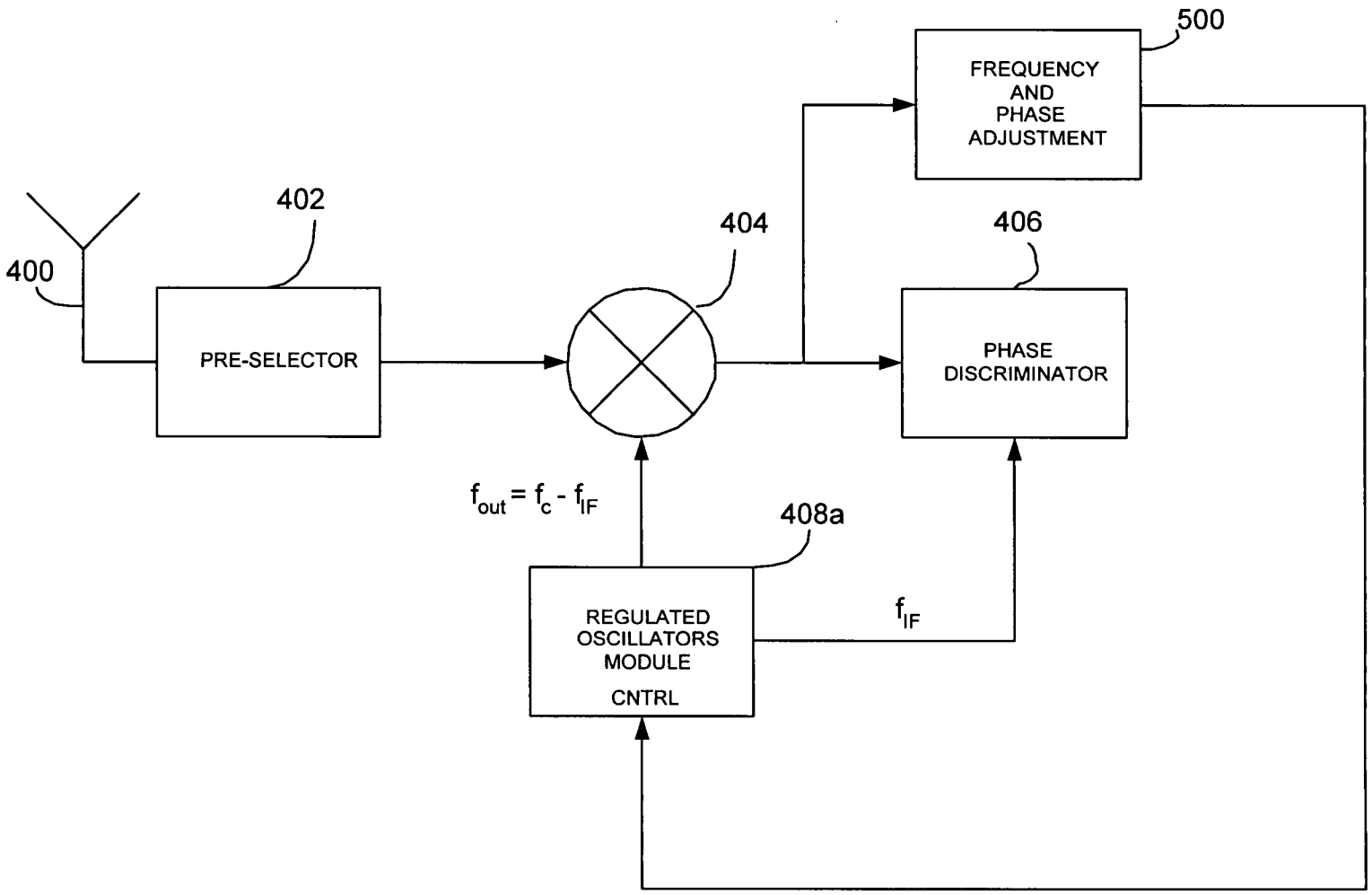

FIG. 5

(PRIOR ART)

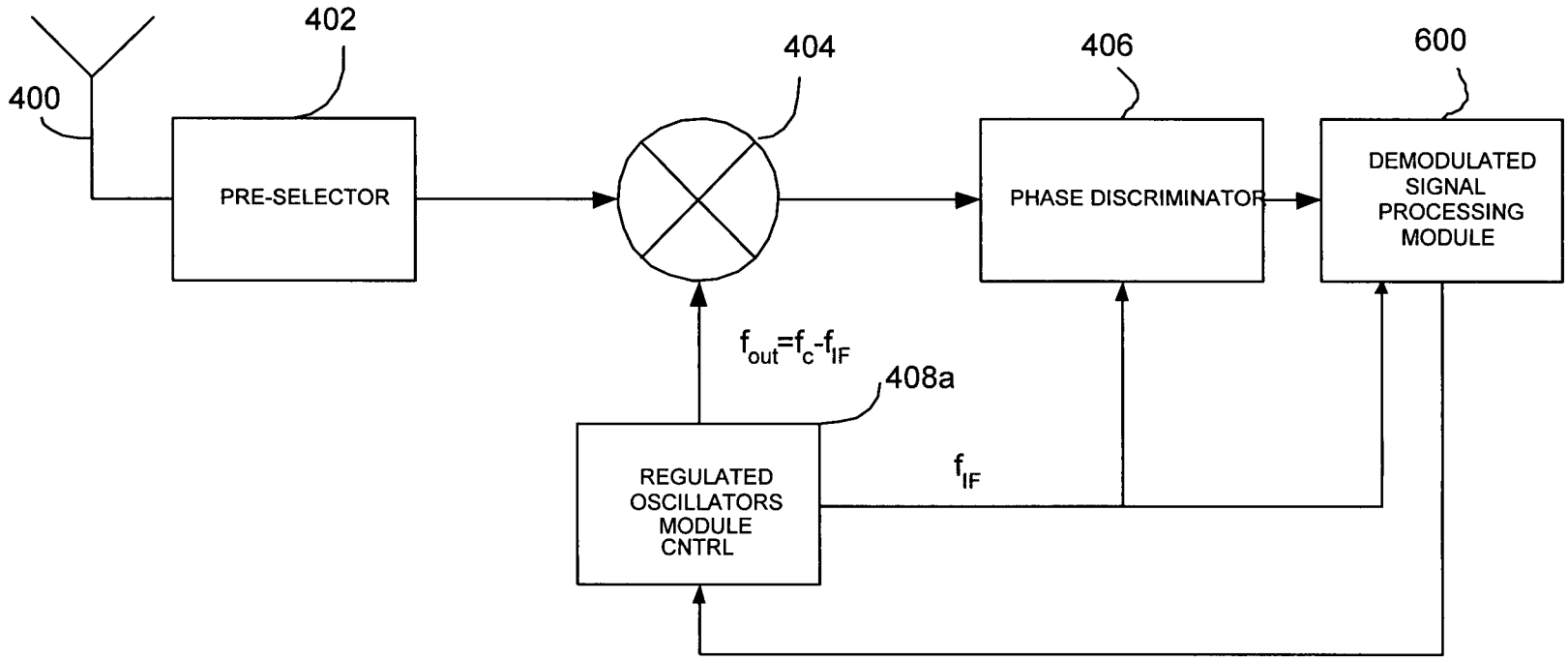

FIG. 6
(PRIOR ART)

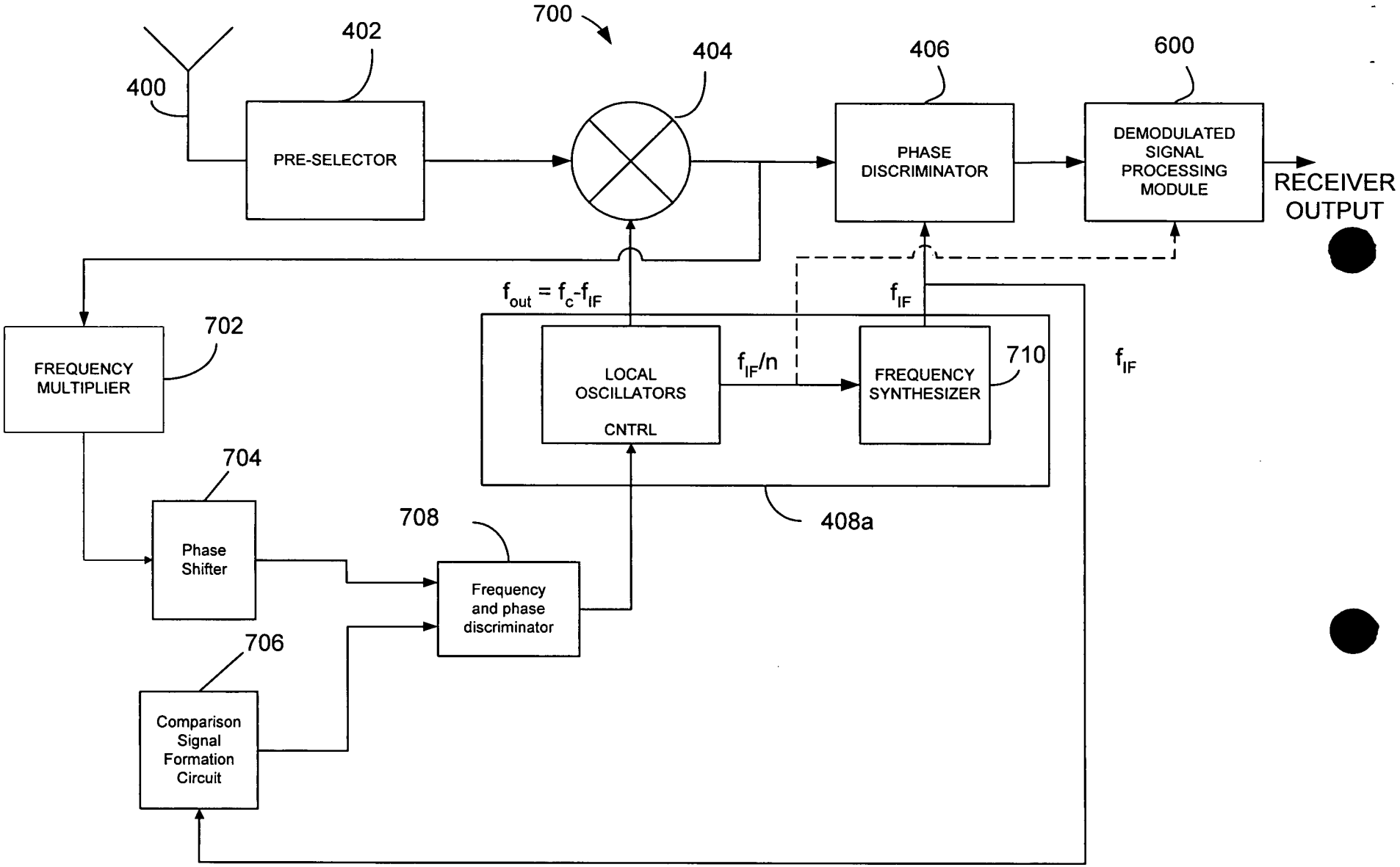
700
402
404
406
600
400
PRE-SELECTOR
PHASE DISCRIMINATOR
DEMODULATED SIGNAL PROCESSING MODULE
RECEIVER OUTPUT
$f_{out} = f_c - f_{IF}$
f_{IF}
f_{IF}
FREQUENCY MULTIPLIER
702
LOCAL OSCILLATORS
CNTRL
f_{IF}/n
FREQUENCY SYNTHESIZER
710
704
Phase Shifter
708
Frequency and phase discriminator
408a
706
Comparison Signal Formation Circuit

FIG. 7

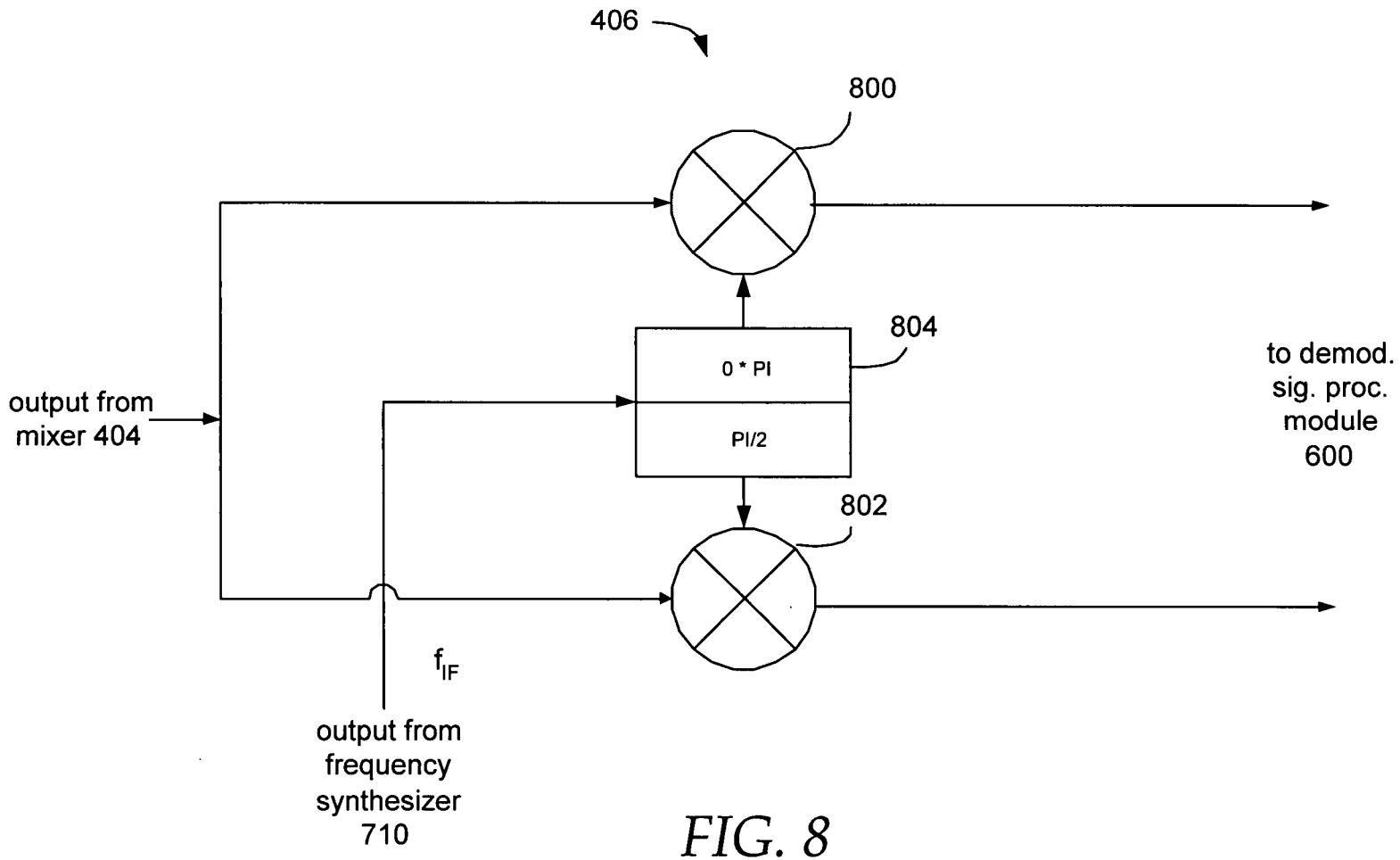
406
800
804
0 * PI
PI/2
802
output from
mixer 404
to demod.
sig. proc.
module
600
f_{IF}
output from
frequency
synthesizer
710

FIG. 8

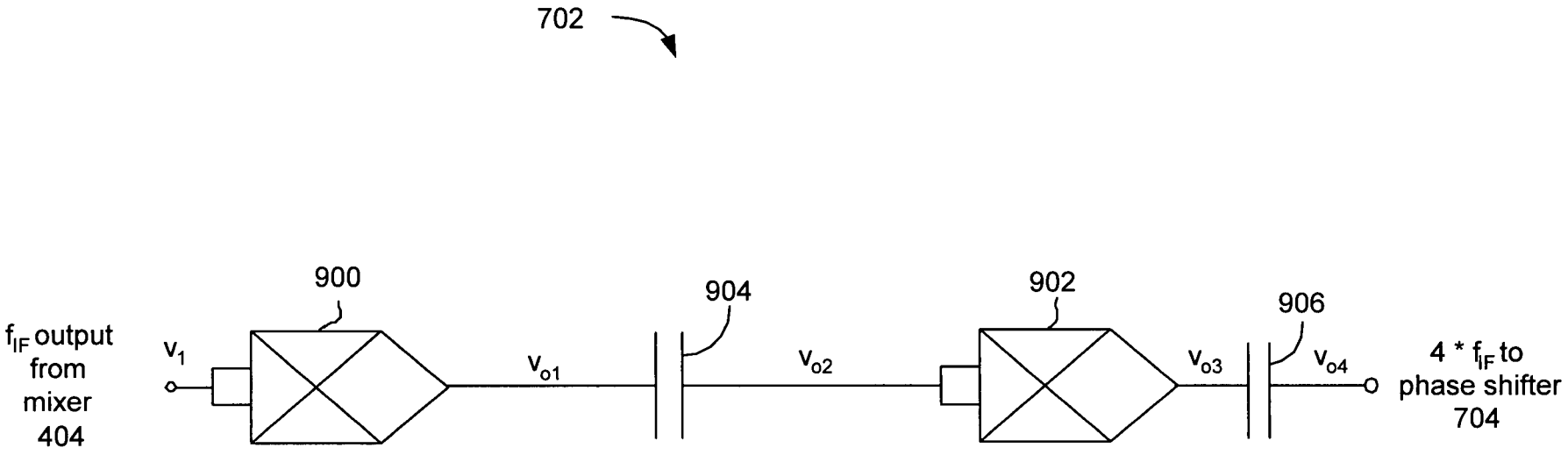
702
900
904
902
906
f_{IF} output from mixer 404
v_1
v_{o1}
v_{o2}
v_{o3}
v_{o4}
4 * f_{IF} to phase shifter 704

FIG. 9

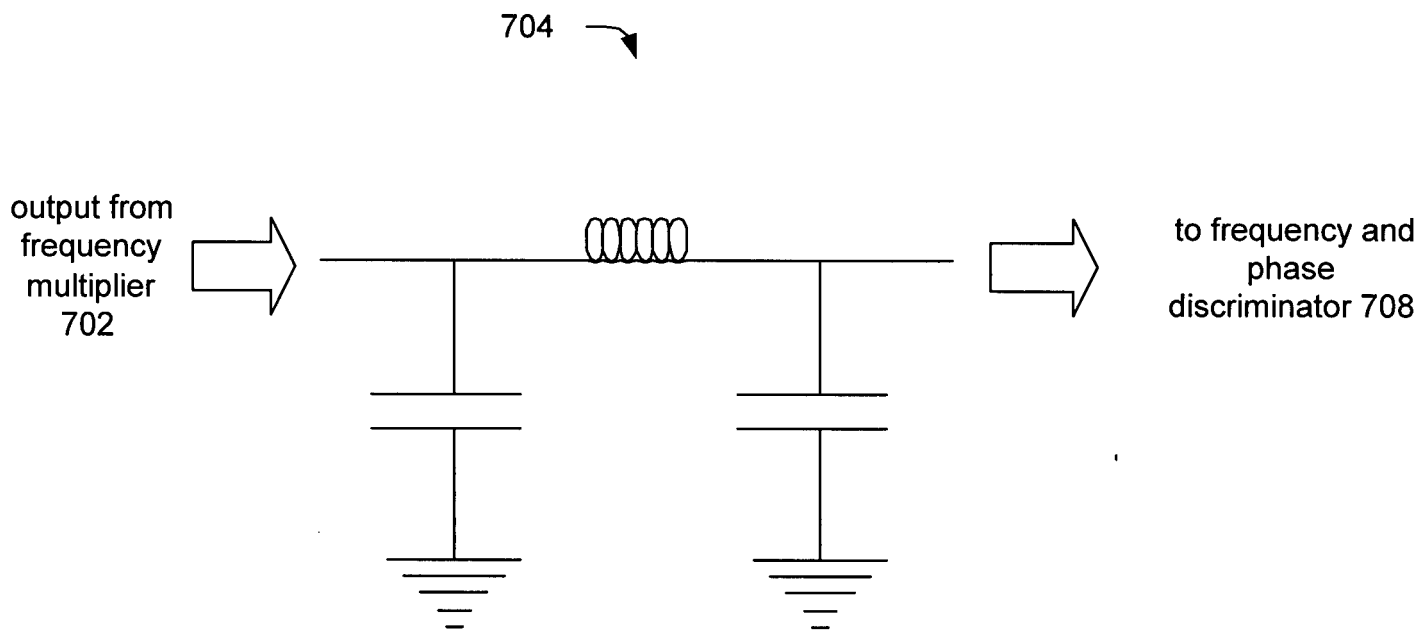
704
output from frequency multiplier 702
to frequency and phase discriminator 708

FIG. 10

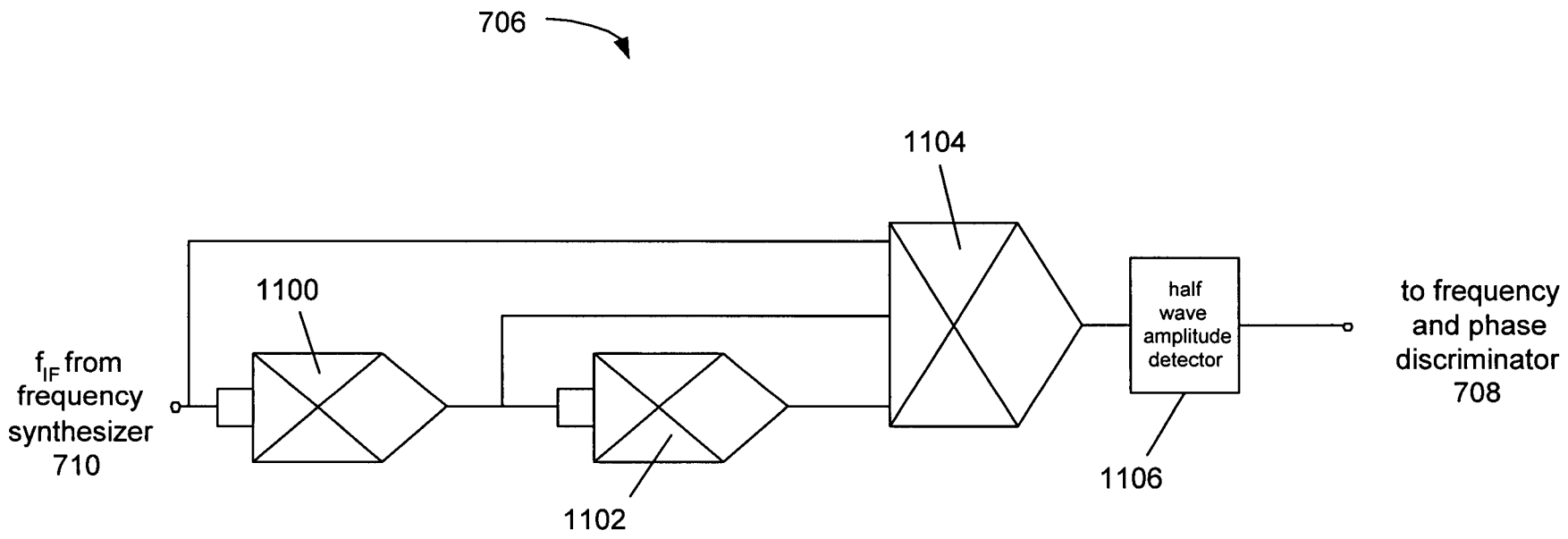
706
1104
1100
half wave amplitude detector
to frequency and phase discriminator 708
f_{IF} from frequency synthesizer 710
1102
1106

FIG. 11

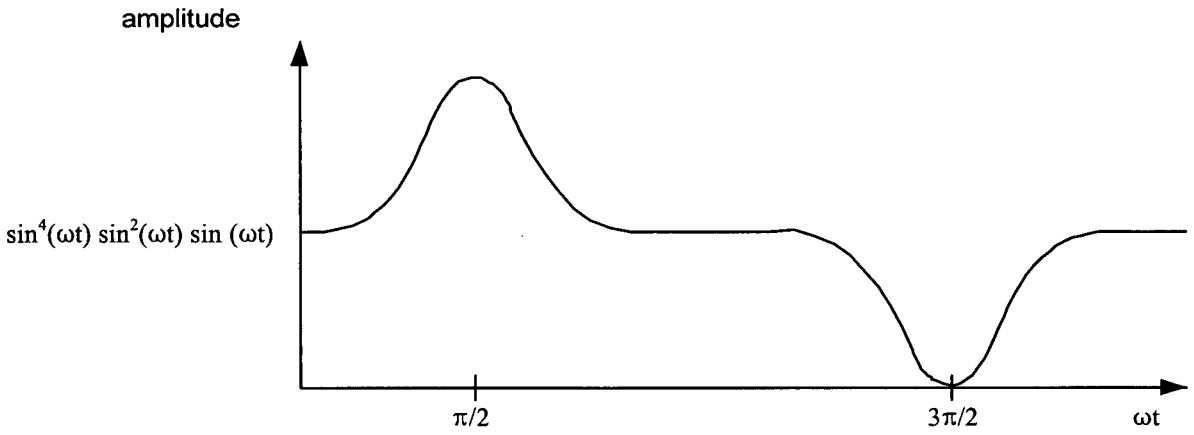

FIG. 12

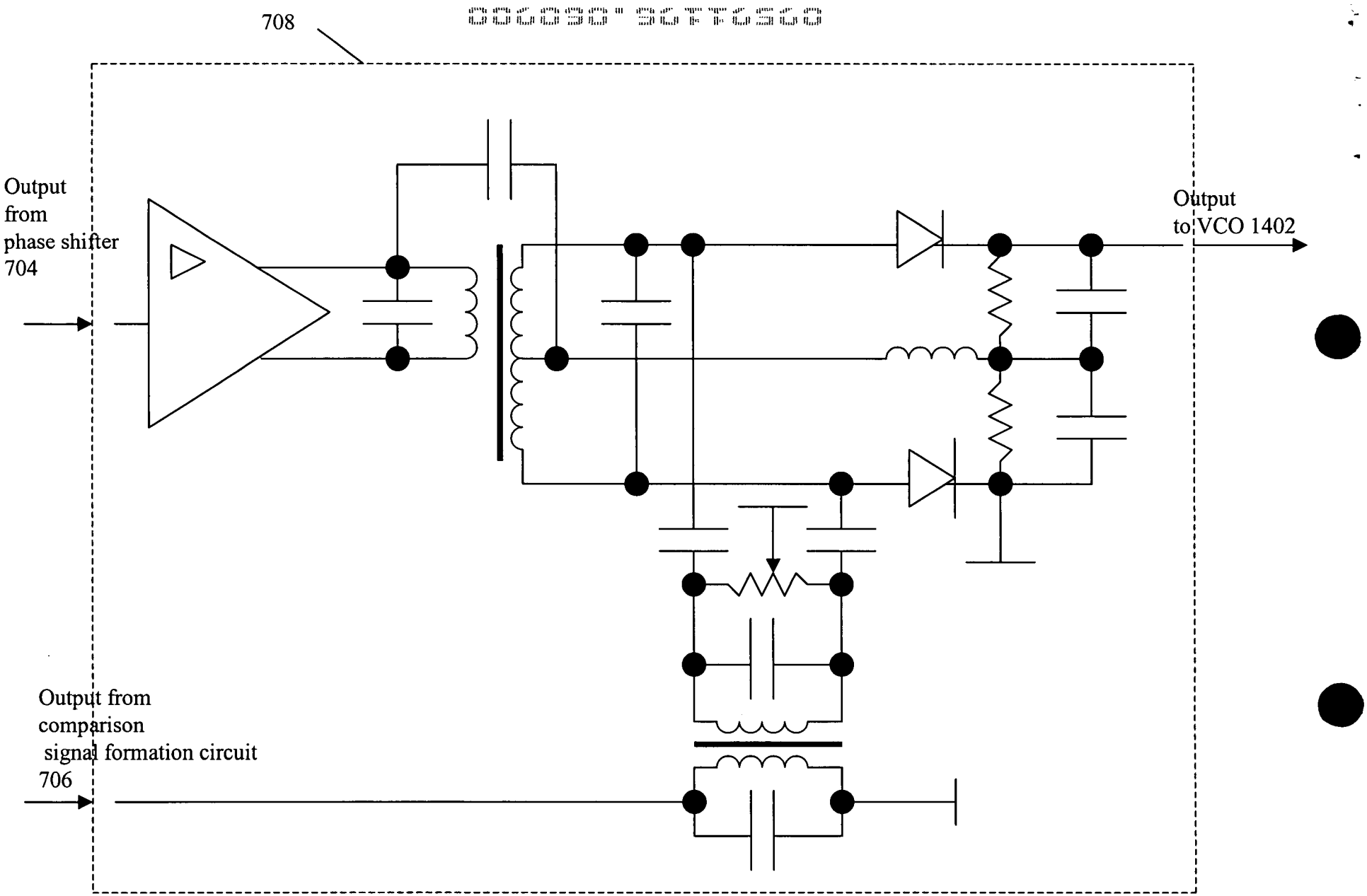
708
Output from phase shifter 704
Output to VCO 1402
Output from comparison signal formation circuit 706

FIG. 13

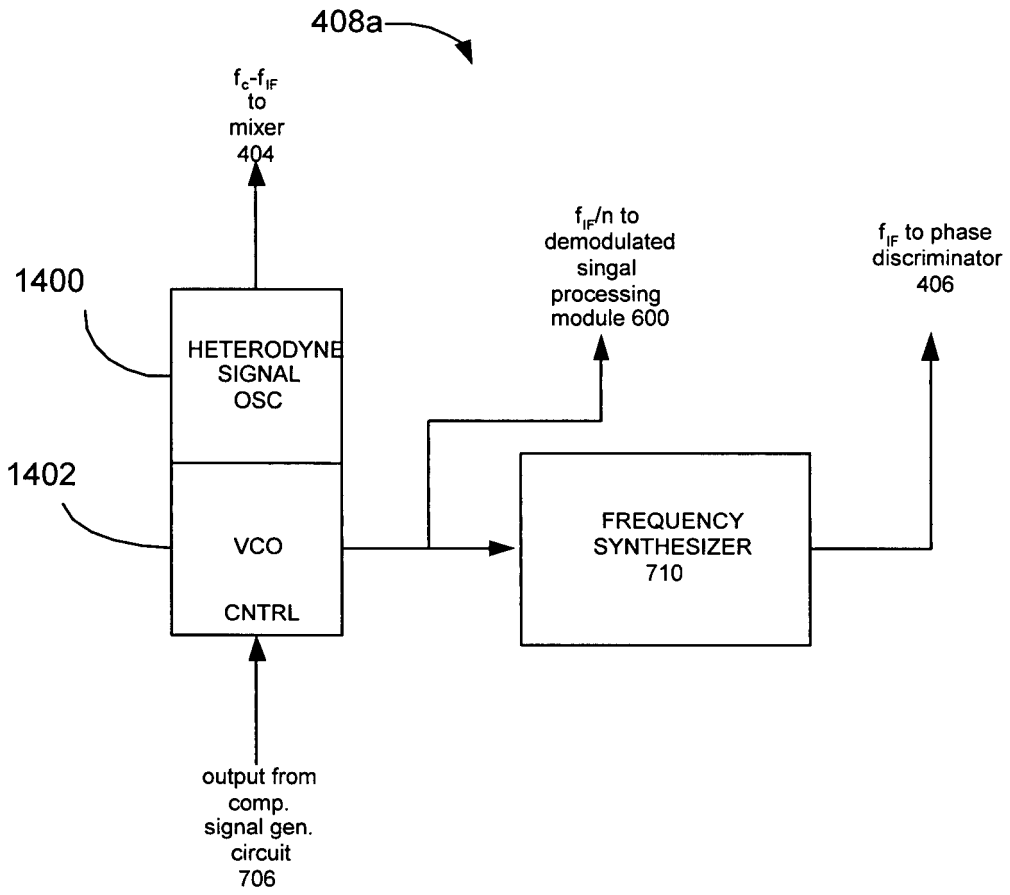
408a
f_c-f_{IF} to mixer 404
f_{IF}/n to demodulated singal processing module 600
f_{IF} to phase discriminator 406
1400
HETERODYNE SIGNAL OSC
1402
VCO
CNTRL
FREQUENCY SYNTHESIZER 710
output from comp. signal gen. circuit 706

FIG. 14